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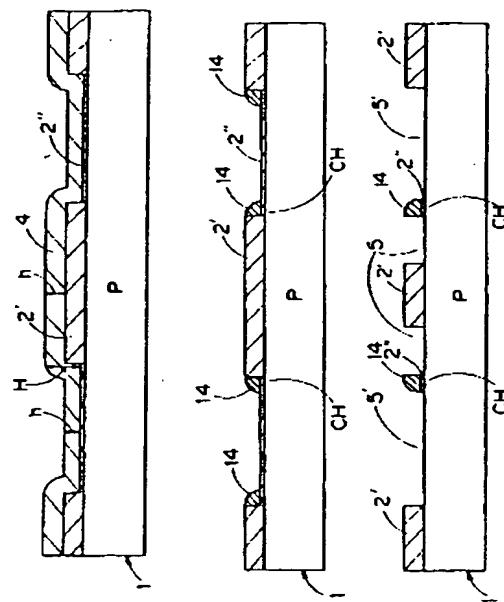
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INVENTOR : OKA NAOMASA;

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TITLE : MANUFACTURE OF FIELD-EFFECT SEMICONDUCTOR DEVICE



ABSTRACT : PURPOSE: To improve the dimensional accuracy of the length of a channel even though the length of the channel is short by a method wherein sidewalls are used as marks in the feed of an impurity for the formation of an opposite conductivity type impurity region.

CONSTITUTION: Sidewalls 14 are used as masks to cover a part which serves as a channel formation region. The accuracy of the lengths of the sidewalls 14 is affected by the respective fluctuations Δt and $\Delta t'$ of the film thickness (t) of a thick oxide film 2' and the film thickness (t') of an Si nitride film 4 for sidewall formation use and a fluctuation in an etching (a side etching). In an etching process for the formation of the sidewalls 14, the sidewalls 14 are not etched at all their sides to come into contact to the side surfaces of the film 2' and the sides on the other side are etched only. Accordingly, the side etching affects one side only of the sidewalls. Therefore, an effect to the dimensional accuracy of a mask width, which is caused by a fluctuation in an etching treatment, is reduced by half.

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